

# Baxter Corporation

## Alliston, Ontario

*“Baxter’s state-of-the-art environmental program is designed to take our company beyond the standards set by current regulations by enhancing our audit and training programs. This approach will ensure that our environmental improvements are more than vague concepts and the opportunities that evolve will be “win-win” for Baxter and the environment.*

*Our alliance with the ministry in this Green Analysis has resulted in a comprehensive study that has strengthened the effectiveness of our waste management initiatives.”*

Garry Wong, P.Eng.  
Engineering Manager  
Baxter Corporation

### THE COMPANY

Baxter Corporation is the leading international manufacturer and distributor of health care products, systems and services. In 1989, the company made a commitment to reduce waste and minimize its impact on the environment.

Baxter’s plant in Alliston, Ontario, already had an excellent program for reducing, reusing and recycling solid waste. Plastics such as polyvinyl chloride and polyethylene, and other packaging materials, are either recycled in the plant or separated and shipped to recyclers.

### THE CHALLENGE

Two of the main products are intravenous solution bags and plastic pour bottles. The processes of water purification, sterilization, cooling, packaging and cleaning are therefore very important. As the Alliston plant uses large volumes of water of various levels of purity, it is equipped with a sophisticated water treatment and steam distillation system.

Other plant processes use ultrafiltered water and chlorinated water.

A water balance, calculating the flow rates of various qualities of water



*Baxter’s Alliston plant manufactures pour bottles for sterile solutions.*

into and out of each process, was a major challenge in the environmental and resource analysis. Baxter and the Ministry of Environment and Energy worked together on an environmental and energy analysis of the Alliston plant. The analysis helped Baxter set priorities and plan new “green” projects.

### OPPORTUNITIES

The company had already greatly reduced solid waste and wanted to achieve similar reductions in water and energy use. The analysis focused on these two areas.

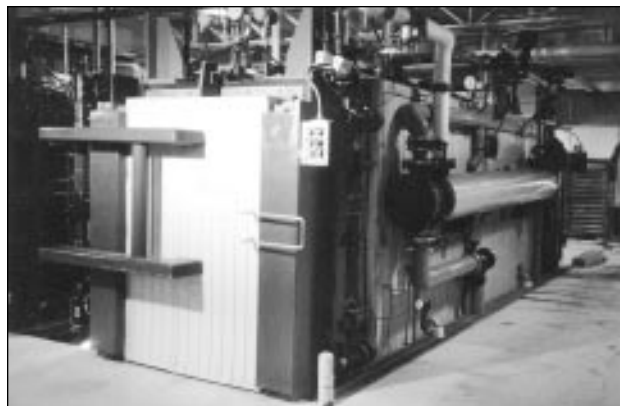
### RECOMMENDATIONS

The analysis identified five opportunities for saving water and reducing liquid effluent and six opportunities for conserving energy. Some of the important recommendations were to:

- ✧ reuse process water in other plant applications;
- ✧ implement electrical load shedding with time-of-use rates;
- ✧ divert uncontaminated liquid effluent to the storm sewer.



Packaging of intravenous bags.



Water savings for sterilizers were recommended.

## POTENTIAL SAVINGS

Potential savings from the recommended improvements were as follows:

| <i>Potential savings as per cent of total plant use or discharge</i> |    |
|--|----|
| Electrical energy  | 7  |
| Water (of various qualities)   | 40 |
| Liquid effluent  | 42 |

## PARTNERSHIP IN POLLUTION PREVENTION AND RESOURCE CONSERVATION

Industrial companies doing business in Ontario may seek ministry/industry services that will help them to:

- \* use energy and water more efficiently;
- \* reduce, reuse and recycle solid waste; and
- \* reduce or eliminate liquid effluents and gaseous emissions.

Equipment and services supply companies can benefit from the information provided on technologies identified for business development.

## FOR FURTHER INFORMATION, PLEASE CONTACT:

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## MINISTRY OF ENVIRONMENT AND ENERGY SERVICES

For information on Ministry of Environment and Energy assistance to industry, please contact the Industry Conservation Branch at (416) 327-1492, Fax (416) 327-1261.

For more project profiles and other publications, visit the ministry's website at <http://www.ene.gov.on.ca>

*This project profile was prepared and published as a public service by the Ontario Ministry of Environment and Energy. Its purpose is to transfer information to Ontario companies about findings and recommendations of a resource conservation and environmental analysis conducted by a consulting engineering firm at an industrial plant in Ontario.*

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